Solution

1. (a) Required rate $= \dfrac{91 \text{ kg}}{7 \text{ days}}$ 2M

$= \underline{\underline{13 \text{ kg/ day}}}$ 2A

(b) Required rate $= \dfrac{161 \text{ candies}}{0.7 \text{ kg}}$ 2M

$= \underline{\underline{230 \text{ candies/ kg}}}$ 2A

(c) Required rate $= \dfrac{\$17.4}{0.3 \text{ kg}}$ 2M

$= \underline{\underline{\$58/ \text{ kg}}}$ 2A

2. $0.5 \text{ km} = 0.5 \times 1\,000 \times 100 \times 10 \text{ mm}$

$= 500\,000 \text{ mm}$ 2A

The scale $= \dfrac{2}{500\,000}$ 2M

$= \dfrac{1}{250\,000}$

$= \underline{\underline{1 : 250\,000}}$ 4A

3. (a) Selling price of steak $= \dfrac{\$550}{500 \text{ g}}$ 3M

$= \underline{\underline{\$1.1/\text{g}}}$ 3A

(b) Weight of steak bought $= \dfrac{1\,650}{1.1 \times 1\,000} \text{ kg}$ 3M

$= \underline{\underline{1.5 \text{ kg}}}$ 3A

4. (a) Actual dimensions of the bedroom $= 8 \times 300 \text{ cm} \times 7 \times 300 \text{ cm}$ 3M

$= 2\,400 \text{ cm} \times 2\,100 \text{ cm}$

$= \underline{\underline{24 \text{ m} \times 21 \text{ m}}}$ 3A

(b) Actual area of the bedroom $= 24 \text{ m} \times 21 \text{ m}$ 3M

$= \underline{\underline{504 \text{ m}^2}}$ 3A

5. (a) $\text{Amount} = \frac{100\,000}{4} \times 0.3 \text{ Hong Kong dollars}$ 3M

$= \underline{\underline{7\,500 \text{ Hong Kong dollars}}}$ 3A

(b) $\text{Amount} = \frac{7\,500}{25} \times 2 \text{ Euro}$ 3M

$= \underline{\underline{600 \text{ Euro}}}$ 3A

6. (a) $\text{Speed of car} = \frac{105 \text{ km}}{1.4 \text{ h}}$ 3M

$= \underline{\underline{75 \text{ km/h}}}$ 3A

(b) $\text{Travelling distance} = (75 + 5) \times \frac{45}{60} \text{ km}$ 3M

$= \underline{\underline{60 \text{ km}}}$ 3A

7. (a) Weight of Benjamin : Weight of Jack = 5 : 3 3M

Weight of Benjamin : Weight of Peter = 4 : 7

$\therefore$ Weight of Benjamin : Weight of Jack : Weight of Peter = $\underline{\underline{20 : 12 : 35}}$ 3A

(b) $\text{Weight of Benjamin} = \frac{20}{12} \times 30 \text{ kg}$ 3M

$= \underline{\underline{50 \text{ kg}}}$ 3A

$\text{Weight of Peter} = \frac{35}{12} \times 30 \text{ kg}$ 3M

$= \underline{\underline{87.5 \text{ kg}}}$ 3A

8. (a) $\text{Volume of water} = 3.6 \times 2 \times 60 \text{ m}^3$ 3M

$= \underline{\underline{432 \text{ m}^3}}$ 3A

(b) $\text{Time required} = (\frac{1\,080 - 432}{4 \times 60} + 2) \text{ hours}$ 4M

$= \underline{\underline{4.7 \text{ hours}}}$ 4A